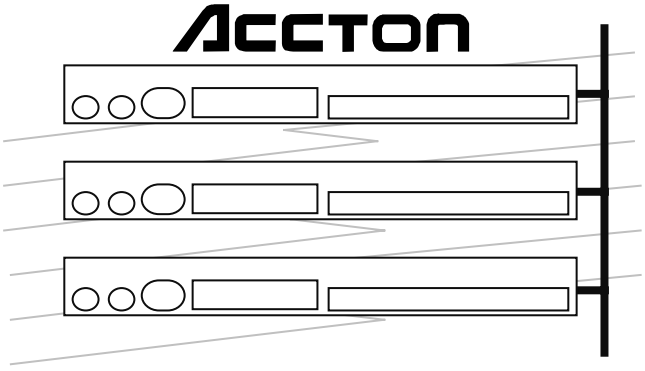
CheetaHub Power-3012B

Installation Manual



Installation Manual

CheetaHub Power-3012B

Ethernet Hub with
12 Dual-Speed RJ-45 Ports
and 1 MII Port

Two Internally Switched Repeaters for
10 Mbps and 100 Mbps Domains in One Package

ACCTON

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EH3012B
150611-101
E0997-R03

Package Contents

Carefully unpack the contents of the package and verify them against the checklist given below.

Package Checklist

- ☑ CheetaHub Power-3012B (Model No. EH3012B)
  Ethernet hub with 12 dual-speed RJ-45 ports and 1 MII port
- ☑ two brackets for rack mounting
- ☑ four rubber foot pads
- ☑ installation manual
- ☑ warranty registration card
- ☑ AC power cord

Please inform your dealer immediately should there be any wrong, missing, or damaged parts.

If possible, retain the carton, including the original packing materials. Use them again to repack the unit in case there is a need to return it for repair.

To qualify for product updates and product warranty registration, fill in the **Owner Registration Card** and return it to Accton Technology Corporation.

Quick Installation

The CheetaHub Power-3012B contains 12 RJ-45 ports for 10 Mbps or 100 Mbps Ethernet connection (detected by auto-sensing). This dual-speed hub contains two internal repeater buses – one for 10 Mbps traffic and another for 100 Mbps traffic. Traffic passing between attached devices that operate at the same speed is isolated within the appropriate repeater bus.

An internal Ethernet switch, consisting of a 10 Mbps and a 100 Mbps switching port, is used to link the repeater buses. Only if traffic has to be passed between a 10 Mbps and a 100 Mbps device, if the destination address is not found in the address table, or broadcast traffic is sent, will data be forwarded to the other internal repeater bus.

This hub provides an ideal bridge between 10 Mbps and 100 Mbps Ethernet networks, all for a price that's comparable to a standard Ethernet or Fast Ethernet hub. Moreover, the smart design built into the display panel provides a friendly interface that simplifies installation and network troubleshooting. If you are already familiar with basic network operations, you should be able to install this hub as described below:

1. Unpack the dual-speed CheetaHub.

2. Find a location close to the network devices you need to connect, and within easy reach of an electrical outlet.

These hubs are suitable for desktop or rack mounting

3. Mount the hub on a desktop or any other flat surface. If you are installing multiple hubs, you can stack them on top of each other (after attaching the foot pads), or install them in a standard size EIA 19-inch rack (using the mounting brackets supplied with the hub).

4. Connect PCs or other network devices to the RJ-45 ports.

Attach PCs or daisy-chain to another device via the RJ-45 ports

Connect any devices that use standard network interface cards to the RJ-45 (MDI-X) station ports (e.g., a workstation, server, bridge or router). This hub uses auto-sensing to dynamically set the required transmission speed at 10 Mbps or 100 Mbps for the RJ-45 ports. To cascade to another hub or switch, run straight-through twisted-pair cable from the MDI port (10/100 Mbps) on this hub to any (MDI-X) station port on the other device (or vice versa). If necessary, you can also cascade to another hub or switch by running crossover cable between MDI-X ports on the two devices.

Use the correct twisted-pair cable

Use unshielded twisted-pair (UTP) or shielded twisted-pair (STP) cable for RJ-45 connections: 100Ω Category 3, 4 or 5 cable for 10 Mbps connections or 100Ω Category 5 cable for 100 Mbps connections. Also be sure that the length of any twisted-pair connection does not exceed 100 meters (328 feet).

Cascade limitations

When using the MDI port for 10 Mbps connections, note that up to 4 hubs can be cascaded. However, when using the MDI port for 100 Mbps connections or when using two MDI-X ports connected with crossover cable for 100 Mbps connections, only 2 hubs can be cascaded.

Limit total network span

When connecting devices to the dual-speed hub, note that the total network span must be limited to:

Single Hub	200 meters of twisted-pair cable
Two-hub Chain	205 meters of twisted-pair cable (for Fast Ethernet links)

For example, if two PCs are connected to a hub, each using 100 meters (328 feet) of twisted-pair cable, then the total network span of 200 meters (656 feet) is within the allowed limits. However, if you cascade two Fast Ethernet hubs, and connect a PC to each hub, each using 100 meters of cable, as in the preceding example, then you can only use 5 meters (16 feet) of twisted-pair cable to link the two hubs together. The only way to extend the cabling that connects the hubs is to reduce the length of cable used to connect the PCs to the hubs.

5. Connect other media types using the D-type MII port.

Attach to alternate media types via the Class I MII port

You can also connect to other network devices using the media independent interface (MII) on the back panel. You can attach to 100BASE-TX (operating at 100 Mbps only), 100BASE-T4 or 100BASE-FX media types by plugging the appropriate transceiver into the MII connector. This port can be used to connect the hub to a collapsed backbone, or for media conversion to a compatible network device. However, note that the MII Port is Class I, and therefore cannot be cascaded to another hub.

Limits on total network span also apply to MII port

When connecting a switch or router to the MII port with twisted-pair cable, the maximum network span is 200 meters or 656 feet (i.e., 100 meters for the downlink from the switch or router to the hub, and 100 meters from hub to workstation). However, by attaching fiber-optic cable to the MII port on the rear panel, the maximum network span can be extended to 260 meters or 853 feet (i.e., 160 meters for the fiber optic downlink from the hub to the switch or router, and 100 meters from hub to workstation).

6. These hubs can serve as a collapsed backbone for small networks, or can be connected to a network interconnection device via one of the RJ-45 ports or the MII port. (Refer to Chapter 3 for sample applications.)

7. Verify network communications by ensuring that:

- you have made all the necessary connections
- you can access any connected resources
- the hub's indicators are functioning properly

If you encounter any problems installing this dual-speed CheetaHub, refer to Chapter 2 for a detailed description of installation procedures, Chapter 3 for sample configurations, or Appendix A for help in troubleshooting.

About this Guide

This guide is designed for the experienced network installer. It describes how to install and operate Accton's dual-speed CheetaHub. After reading this manual, you should be able to use the front display panel and configure options to manage all your network connections.

This manual covers the following topics:

Chapter 1 - **Product Overview**
Brief description of Fast Ethernet technology, followed by a description of this hub and a summary of its important features and specifications.

Chapter 2 - **Installing the System**
Installing a dual-speed CheetaHub and making basic network connections.

Chapter 3 - **Setting up Network Connections**
Shows sample network configurations for a local area network.

Appendices - Troubleshooting, cable assignments, and product specifications.

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